National Institute of Environmental Health Sciences

Status of blood pressure among individuals consuming saline water

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Abstract:

Climate change is taking its toll in the form of saline water intrusion into the mainland of Bangladesh, which is one of the lowest-altitude countries in the world. The study was carried out with the objective to assess the blood pressure status associated with salinity in saline prone selected areas of Bagherhat and Tangail districts from March 2008 - June 2008 of rural Bangladesh. Two hundred and ninety subjects were selected purposively from both the districts. About 70% of the respondents were males and below forty years of age. More than two thirds of the respondents were illiterate; belong to 4-5 member family, with monthly family income of less than Tk. 4000 per month. Only one third of the respondents were smokers. More than two thirds of the respondents from salinity area had salinity level of 2-3%. Among them majority were drinking saline water for 6-10 years and 26% were drinking for more than ten years. About 20% of the non saline respondents' systolic blood pressure was 110-120 mm of Hg and 26% of saline area had systolic blood pressure >135-140 mm of Hg. Mean systolic BP among salinity area was more than that for non salinity area. About 19% of the non saline respondents' diastolic blood pressure was /Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 90 mm of Hg, among them 31% were from saline area. Mean diastolic BP among salinity area was more than non salinity area. There was no history of heart disease, and less than 1% was diabetic among them. About two thirds had mean arterial pressure 70 mm of Hg, among them majority were from saline area. The study concluded that systolic and diastolic blood pressures of saline group were significantly higher than that of the non saline group.

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Temperature, Other Exposure

Temperature: Fluctuations

Other Exposure: water salinity

Geographic Feature:

resource focuses on specific type of geography

Other Geographical Feature

Other Geographical Feature : subtropical

Geographic Location: ☑

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: Other Asian Country

Other Asian Country: Bangladesh

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect

Cardiovascular Effect: Other Cardiovascular Effect

Cardiovascular Disease (other): mean arterial pressure; blood pressure

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Low Socioeconomic Status

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified